difference due to the anatomical construction of the eye; that with increased pressure the decreasing distensibility of the sclera opposes every sudden and marked increase of the blood, and moderates the deleterious action that strong currents of that fluid could produce in this delicate organ. The course of the retinal vessels through the optic nerve and the oblique course of the choroidal veins through the sclera probably serve to stay the otherwise too rapid exit of the blood from the eye. He also investigated the circulation of the brain principally by determining the intercranial pressure, and measurement of velocity and inter-arterial pressure, and found the results analogous to those about the circulation in the eye. The dependence of the circulation in the eye on that of the brain is expressed by the following sentences: 1. Collateral hyperæmia of the brain is accompanied by the same in the eye, and manifests itself by increased intra-ocular pressure and slight dilatation of the blood-vessels of the retina and choroid. 2. A passive (venous) hyperæmia induces the same of the eye only when the venous obstruction is central in the vena jugularis, or especially when in the thorax. 3. Decreased arterial supply gives rise to marked anæmia in the eye and decreased intra-ocular pressure. By injecting one-half per cent. solution of chloride of sodium into the subarachnoidal sac with constant pressure, when the intracranial pressure rises to forty to sixty mm. Hg., a characteristic picture will appear in the eye. The excavation of the disc is increased as its floor is pressed forward (choked disc). These facts are thought to be entirely in accordance with affections of the brain in which an abnormal quantity of fluid has accumulated in the ventricles. Brain-tumor influences the circulation only when it is complicated with exudation into the subarach-noidal space. The cause of the intra-ocular appearances, of which the most marked is choked disc, is the necessary encroachment of the cerebro-spinal fluid into the intervaginal spaces of the optic nerve, and the resultant compression of the vasa centralis retinæ which was also produced experimentally. By concussion of the brain, as by a padded hammer, the intra-ocular pressure exhibits an increase contemporary with that in the brain, but quickly falls below normal, as soon as the blood-pressure has fallen. On further blows it falls more, the intra-ocular blood-vessels show diminished distension and become smaller. The cause of these phenomena is irritation of the medulla oblongata. The certain and the only means of diagnosis between compression and concussion is by means of the ophthalmoscope.—*The Weekly Medical Review*, vol. vii, No. 10.

THE SUMMATION OF IRRITANTS ON THE VASO-MOTOR CENTRE.—Kronecker and Nicolaides have made experiments upon the main vaso-motor centre by means of electrical irritations. They used narcotized dogs whose medulla oblongata was severed from the brain above the vaso-motor centre. The animals were curarized, and artificial respiration was kept up. Their conclusions are as follows:

1. Separate induction shocks directly of the medulla oblongata or the spinal cord below it has no action upon the blood-pressure, or at least very little, even when currents are used whose single break has a tetanizing effect.

2. When at least two to three irritations in a second, if moderately strong currents were used, then there is an action through the summation of irritations.

3. These seldom irritations have an effect when their intensity is increased, but the vaso-motor action through increase of intensity of the current never attains to such a height, as through irritation with moderately strong currents of greater frequence.

4. When the intensity of the irritating current is constant, and the frequency of its breaks is increased, then the effect of the irritation on the vaso-motor increases. This effect does not increase after the frequency of the shocks has reached twenty to thirty in a second.

5. The maximum of blood-pressure by different animals, as dogs and rabbits of the same species and size, is of very different amount, and this maximum is obtained through strong irritations of moderate frequency (about ten to twelve breaks per second), and also through the moderately strong irritations of maximal frequency (twenty to twenty-five in a second).

6. The maximum of the blood-pressure was less when, later, even stronger irritations were reached, than when frequent weaker irritations were used.

7. After the irritation of the vaso-motor centre is ended, the blood-pressure gradually sinks.—*DuBois' Arch.*, 1883, Erster Heft.

THE ACT OF DEGLUTITION.—I. Steiner has been performing experiments upon the centre of deglutition, and the respiratory centre in rabbits, cats, and dogs. His conclusions are as follows: Every act of deglutition which ensues upon irritation of the superior laryngeus is connected with a respiratory movement. He believes that the two centres of deglutition and respiration are connected with each other by a so-called intra-central nerve-fibre.—*DuBois' Arch.*, 1883, Erster Heft.

EFFECT OF ANÆMIA ON THE ELECTRIC IRRITABILITY OF THE BRAIN.—Munk and Orschansky have experimented upon this subject: Losses of blood equal to $\frac{1}{7}$ of the whole quantity are without effect. About $\frac{1}{5}$ of the whole blood when lost increases the irritability, whilst greater losses of blood decrease the irritability. Gradual loss of blood affects the irritability less than rapid. Between the changes of blood-pressure and the irritability of the brain there is no parallel.—*DuBois' Arch.*, 1883, Erster Heft.

PATH OF FIBRES IN THE SPINAL CORD.—Dr. Wasil Kusmin has made a number of experiments as to the path of the fibres in the